Examiner's Search Notes
9/28/2004

L Number	Hits	Search Text	DB	Time stamp
1	567	molloy-$.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:40
2	1269	watt-$.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:40
3	1	molloy-$.in. and watt-$.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:40
4	1835	molloy-$.in. or watt-$.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:40
5	137	pmsa	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:40
6	673	prostate with specific with membrane with antigen	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:45
7	0	pmsa and (molloy-$.in. or watt-$.in.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:46
8	1	(prostate with specific with membrane with antigen) and (molloy-$.in. or watt-$.in.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:41
9	740	pmsa or (prostate with specific with membrane with antigen)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:41
10	4	(pmsa or (prostate with specific with membrane with antigen)) with gene with intron	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:44
12	72	"5538866"	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:44
13	2	5538866.pn.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:44
11	6	(pmsa or (prostate with specific with membrane with antigen)) with intron	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:45
14	731	prostate with specific with membrane	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:45
15	1	(prostate with specific with membrane) and (molloy-$.in. or watt-$.in.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:46

16	2	(pmsa or (prostate with specific with membrane with antigen)) with gene with enhancer	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:46
17	0	OadV63$4	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:49
18	39491	pnp or (purine adj2 nucleoside adj2 phosphorylase)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:50
20	1	(pnp or (purine adj2 nucleoside adj2 phosphorylase)) and (ovine adj2 atadenovirus)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:51
21	0	LNCaP-LN3	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:51
22	5	LN3 and prostate	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:51
23	1295	PC3 and prostate	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:52
24	829	(PC3 and prostate) and ((nude or balb$3) with (mice or mouse))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:57
25	70	(PC3 and prostate) and ((nude or balb$3) with (mice or mouse) with PC3)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:53
26	0	(PC3 and prostate) and ((nude or balb$3) with (mice or mouse) with PC3).clm.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:54
27	4	(PC3 and prostate) and ((nude or balb$3) with (mice or mouse) with PC3 with model)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:54
28	0	(PC3 and prostate) and ((nude or balb$3) with (mice or mouse)) and (ovine adj2 atadenovirus)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:57
29	0	(PC3 and prostate) and ((nude or balb$3) with (mice or mouse)) and atadenovirus	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 11:57
19	6	ovine adj2 atadenovirus	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 12:01
30	67	(probasin adj2 promoter) or PSMEPb	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 12:02

31	0	((probasin adj2 promoter) or PSMEPb) and (ovine adj2 atadenovirus)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 12:02
32	6	((probasin adj2 promoter) or PSMEPb) and (pnp or (purine adj2 nucleoside adj2 phosphorylase))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2004/09/28 12:02

(FILE 'HOME' ENTERED AT 12:12:33 ON 28 SEP 2004)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:12:47 ON 28 SEP 2004

L1	4461	S	(MOLLOY, ?)/IN,AU
L2	13251	S	(WATT, ?)/IN,AU
L3	55	S	L1 AND L2
L4	17657	S	L1 OR L2
L5	1938	S	PSMA OR (PROSTATE (S) MEMBRANE (S) SPECIFIC (S) ANTIGEN)
L6	24	S	L5 AND L4
L7	18	S	L6 AND ENHANCER
L8	8		DUPLICATE REMOVE L7 (10 DUPLICATES REMOVED)
L9	14629	S	PNP OR (PURINE (S) NUCLEOSIDE (S) PHOSPHORYLASE)
L10	1	S	L9 AND L5
L11	647187	S	ANIMAL (S) MODEL
L12	6469	S	LN3 OR PC3
L13	195	S	L11 AND L12
L14	241555	S	(NUDE OR BALB?) (S) (MOUSE OR MICE)
L15	324	S	L14 AND L12
L16	78	S	L13 AND L15
L17	1	S	L9 AND L16
L18	2	S	L5 AND L16
L19	3	S	L17 OR L18
L20	3		DUPLICATE REMOVE L19 (0 DUPLICATES REMOVED)
L21	306	S	PROBASIN (S) PROMOTER
L22	57	S	L5 (S) ENHANCER
L23	3495	S	INTRON (2W) "3"
L24	1	S	L22 AND L23
L25	0	S	L21 AND L22

L8 ANSWER 7 OF 8 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2001022485 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11027414
TITLE: **Prostate-specific** suicide gene therapy using the **prostate-specific membrane antigen** promoter and **enhancer.**
AUTHOR: O'Keefe D S; Uchida A; Bacich D J; **Watt F B;** Martorana A; **Molloy P L;** Heston W D
CORPORATE SOURCE: George M. O'Brien Urology Research Center, Department of Cancer Biology, Lerner Research Institute, Cleveland Clinic Foundation, Cleveland, Ohio, USA.
SOURCE: Prostate, (2000 Oct 1) 45 (2) 149-57.
Journal code: 8101368. ISSN: 0270-4137.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200011
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001109

AB BACKGROUND: **Prostate-specific membrane antigen** (**PSMA**) is abundantly expressed in virtually 100% of **prostate** cancers and metastases. In addition, unlike prostate-specific antigen (PSA), **PSMA** is upregulated under conditions of androgen deprivation. Therefore, **PSMA** is an attractive therapeutic target for advanced prostate cancer. Recently, both the promoter and the **enhancer** driving prostate-specific expression of the **PSMA** gene were cloned. We describe here our analysis of the **PSMA enhancer** for the most active region(s) and present a way of using the **enhancer** in combination with the E. coli cytosine deaminase gene for suicide-driven gene therapy that converts the nontoxic prodrug 5-fluorocytosine (5-FC) into the cytotoxic drug 5-fluorouracil (5-FU) in prostate cancer cells. METHODS: Deletion constructs of the full-length **PSMA enhancer** were subcloned into a luciferase reporter vector containing either the **PSMA** or SV-40 promoter. The most active portion of the **enhancer** was then determined via luciferase activity in the C4-2 cell line. We then replaced the luciferase gene with the E. coli cytosine deaminase gene in the subclone that showed the most luciferase activity. The specificity of this technique was examined in vitro, using the prostate cancer cell line LNCaP, its androgen-independent derivative C4-2, and a number of nonprostatic cell lines. The toxicity of 5-FC and 5-FU on transiently transfected cell lines was then compared. RESULTS: The **enhancer** region originally isolated from the **PSMA** gene was approximately 2 kb. Deletion constructs revealed that at least two distinct regions seem to contribute to expression of the gene in prostate cancer cells, and therefore the best construct for prostate-specific expression was determined to be 1, 648 bp long. The IC(50) of 5-FC was similar in all cell lines tested (>10 mM). However, transfection with the 1648 nt **PSMA enhancer** and the **PSMA** promoter to drive the cytosine deaminase gene enhanced toxicity in a dose-dependent manner more than 50-fold, while cells that did not express the **PSMA** gene were not significantly sensitized by transfection. CONCLUSIONS: Suicide gene therapy using the **PSMA enhancer** may be of benefit to patients who have undergone androgen ablation therapy and are suffering a relapse of disease.

L8 ANSWER 3 OF 8 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2001457325 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11502468
TITLE: In vivo suicide gene therapy model using a newly discovered **prostate-specific membrane antigen** promoter/**enhancer**: a potential alternative approach to androgen deprivation therapy.
AUTHOR: Uchida A; O'Keefe D S; Bacich D J; **Molloy P L**; Heston W D
CORPORATE SOURCE: George M. O'Brien Urology Research Center, Department of Cancer Biology, Lerner Research Institute, Cleveland Clinic Foundation, Cleveland, Ohio 44195, USA.
CONTRACT NUMBER: DK/CA47650 (NIDDK)
SOURCE: Urology, (2001 Aug) 58 (2 Suppl 1) 132-9.
Journal code: 0366151. ISSN: 1527-9995.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200110
ENTRY DATE: Entered STN: 20010815
Last Updated on STN: 20011029
Entered Medline: 20011025

AB **Prostate-specific membrane antigen** (**PSMA**) is a type-2 **membrane** protein expressed in the **prostate**, and it is highly expressed in metastatic or poorly differentiated adenocarcinomas. Moreover, **PSMA** expression is upregulated by androgen deprivation. These advantages make **PSMA** a useful target for prostate cancer therapy, especially in combination with conventional hormonal treatment. We recently reported that a prostate-specific **enhancer** is present in the third intron of the **PSMA** gene. In this study, we have further analyzed the activity of **PSMA** promoter/**enhancer** in prostate cancer cells and cells of other tissue origins (breast cancer MCF-7, lung cancer H157, and colorectal cancer HCT8 cells), and we have examined whether this construct could be used for efficient expression of the suicide gene, cytosine deaminase (CD), in vivo. The **PSMA** promoter/**enhancer** expressed the luciferase reporter gene in the prostate cancer lines LNCaP and C4-2, with 8- to 20-fold higher expression than the simian virus 40 promoter/**enhancer**, although it was inactive in the other cell lines. This construct efficiently drove the suicide gene CD, sensitizing C4-2 cells to 5-fluorocytosine (5-FC) with the inhibitory concentration (IC(50)) <300 micromol/L in vitro. Athymic male nude mice bearing the transfected C4-2 cells were treated with intraperitoneal injections of either 5-FC (600 mg/kg) twice a day or saline solution for 3 weeks. C4-2 cell tumors were eliminated by 5-FC when they were expressing our therapeutic construct carrying CD under the regulatory control of the **PSMA** promoter/**enhancer**. Our results show the in vivo utility of the **PSMA** promoter/**enhancer** in a gene therapy situation targeting prostate cancer.

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NEWS 4	Jul 30	BEILSTEIN on STN workshop to be held August 24 in conjunction with the 228th ACS National Meeting
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NEWS 14	SEP 14	STN Patent Forum to be held October 13, 2004, in Iselin, NJ
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NEWS EXPRESS	JULY 30 CURRENT WINDOWS VERSION IS V7.01, CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP), AND CURRENT DISCOVER FILE IS DATED 11 AUGUST 2004
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FILE 'HOME' ENTERED AT 12:12:33 ON 28 SEP 2004

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=> FILE MEDLINE EMBASE BIOSIS CAPLUS
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                        ENTRY    SESSION
FULL ESTIMATED COST                                      0.21       0.21

FILE 'MEDLINE' ENTERED AT 12:12:47 ON 28 SEP 2004

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=> S (MOLLOY, ?)/IN,AU
'IN' IS NOT A VALID FIELD CODE
'IN' IS NOT A VALID FIELD CODE
L1        4461 (MOLLOY, ?)/IN,AU

=> S (WATT, ?)/IN,AU
'IN' IS NOT A VALID FIELD CODE
'IN' IS NOT A VALID FIELD CODE
L2       13251 (WATT, ?)/IN,AU

=> S L1 AND L2
L3          55 L1 AND L2

=> S L1 OR L2
L4       17657 L1 OR L2

=> S PSMA OR (PROSTATE (S) MEMBRANE (S) SPECIFIC (S) ANTIGEN)
L5        1938 PSMA OR (PROSTATE (S) MEMBRANE (S) SPECIFIC (S) ANTIGEN)

=> S L5 AND L4
L6          24 L5 AND L4

=> S L6 AND ENHANCER
L7          18 L6 AND ENHANCER

=> DUPLICATE REMOVE L7
DUPLICATE PREFERENCE IS 'MEDLINE, EMBASE, BIOSIS, CAPLUS'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):N
PROCESSING COMPLETED FOR L7
L8             8 DUPLICATE REMOVE L7 (10 DUPLICATES REMOVED)

=> D IBIB AB L8 1-8

L8   ANSWER 1 OF 8  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        2003:416002  CAPLUS
DOCUMENT NUMBER:         139:95943
TITLE:                   Enhancer trap method using a green
                         fluorescent protein reporter plasmid for cloning
                         tissue-specific enhancers active in prostate cells
AUTHOR(S):               Watt, Fujiko; Molloy, Peter
CORPORATE SOURCE:        CSIRO Molecular Science, North Ryde, Australia
SOURCE:                  Methods in Molecular Medicine (2003), 81(Prostate
                         Cancer Methods and Protocols), 321-331
```

CODEN: MMMEFN
PUBLISHER: Humana Press Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English

AB A method for cloning DNA fragments containing **enhancer** activity is described. The method involves making a DNA library of random partially overlapping restriction fragments covering the gene. These fragments are cloned into a vector containing the green fluorescent protein (GFP) reporter gene under the control of a basal promoter. The library is then screened for **enhancer**-containing DNA fragments by transfection of plasmids into tissue culture cells and identifying those that provide higher GFP reporter protein expression than the promoter only plasmid. The method has been used for identifying the **prostate-specific membrane antigen** gene **enhancer**.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 2 OF 8 MEDLINE on STN DUPLICATE 1
ACCESSION NUMBER: 2001252462 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11350116
TITLE: A tissue-**specific enhancer** of the **prostate-specific membrane antigen** gene, FOLH1.
AUTHOR: **Watt F**; Martorana A; Brookes D E; Ho T; Kingsley E; O'Keefe D S; Russell P J; Heston W D; **Molloy P L**
CORPORATE SOURCE: CSIRO Molecular Science, North Ryde, New South Wales, 2113, Australia.
CONTRACT NUMBER: DK/CA 47650 (NIDDK)
SOURCE: Genomics, (2001 May 1) 73 (3) 243-54.
Journal code: 8800135. ISSN: 0888-7543.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF007544
ENTRY MONTH: 200109
ENTRY DATE: Entered STN: 20010910
Last Updated on STN: 20010910
Entered Medline: 20010906

AB **Prostate-specific membrane antigen** (**PSMA**) is an integral **membrane** protein that is highly expressed on the surface of **prostate** epithelial cells. It is also expressed on the vascular endothelium of a number of tumor types. We have used an **enhancer** trap approach with randomly cleaved overlapping DNA fragments from an approximately 55-kb P1 cosmid insert encompassing the 5' half and upstream sequences of the **PSMA** gene (FOLH1) to isolate an **enhancer** that strongly activates the FOLH1 core promoter region. The **enhancer** (PSME) is located in the third intron about 12 kb downstream from the start site of transcription and is characterized by a 72-bp direct repeat within a 331-bp core region. The PSME activates transcription from its own and heterologous promoters in prostate cell lines; enhancement is greatest in the **PSMA** -expressing cell line LNCaP (>250-fold). The PSME shows essentially no activity in five nonprostate cell lines. PSME-enhanced expression is repressed in the presence of androgen, mimicking the repression of the endogenous FOLH1 gene. The data demonstrate that both cell-type specificity and androgen regulation are intrinsic properties of the **enhancer**. These properties make the PSME an excellent candidate for regulation of gene expression in gene therapy approaches to prostate cancer.

L8 ANSWER 3 OF 8 MEDLINE on STN DUPLICATE 2
ACCESSION NUMBER: 2001457325 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11502468
TITLE: In vivo suicide gene therapy model using a newly discovered **prostate-specific membrane antigen** promoter/**enhancer**: a potential alternative approach to androgen deprivation therapy.
AUTHOR: Uchida A; O'Keefe D S; Bacich D J; **Molloy P L**; Heston W D
CORPORATE SOURCE: George M. O'Brien Urology Research Center, Department of Cancer Biology, Lerner Research Institute, Cleveland Clinic Foundation, Cleveland, Ohio 44195, USA.
CONTRACT NUMBER: DK/CA47650 (NIDDK)
SOURCE: Urology, (2001 Aug) 58 (2 Suppl 1) 132-9.
Journal code: 0366151. ISSN: 1527-9995.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200110
ENTRY DATE: Entered STN: 20010815
Last Updated on STN: 20011029
Entered Medline: 20011025

AB **Prostate-specific membrane antigen** (**PSMA**) is a type-2 **membrane** protein expressed in the **prostate**, and it is highly expressed in metastatic or poorly differentiated adenocarcinomas. Moreover, **PSMA** expression is upregulated by androgen deprivation. These advantages make **PSMA** a useful target for prostate cancer therapy, especially in combination with conventional hormonal treatment. We recently reported that a prostate-specific **enhancer** is present in the third intron of the **PSMA** gene. In this study, we have further analyzed the activity of **PSMA** promoter/**enhancer** in prostate cancer cells and cells of other tissue origins (breast cancer MCF-7, lung cancer H157, and colorectal cancer HCT8 cells), and we have examined whether this construct could be used for efficient expression of the suicide gene, cytosine deaminase (CD), in vivo. The **PSMA** promoter/**enhancer** expressed the luciferase reporter gene in the prostate cancer lines LNCaP and C4-2, with 8- to 20-fold higher expression than the simian virus 40 promoter/**enhancer**, although it was inactive in the other cell lines. This construct efficiently drove the suicide gene CD, sensitizing C4-2 cells to 5-fluorocytosine (5-FC) with the inhibitory concentration (IC(50)) <300 micromol/L in vitro. Athymic male nude mice bearing the transfected C4-2 cells were treated with intraperitoneal injections of either 5-FC (600 mg/kg) twice a day or saline solution for 3 weeks. C4-2 cell tumors were eliminated by 5-FC when they were expressing our therapeutic construct carrying CD under the regulatory control of the **PSMA** promoter/**enhancer**. Our results show the in vivo utility of the **PSMA** promoter/**enhancer** in a gene therapy situation targeting prostate cancer.

L8 ANSWER 4 OF 8 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:628262 CAPLUS
DOCUMENT NUMBER: 133:218508
TITLE: Regulatory constructs using the **enhancer** of intron 3 of the androgen-independent **prostate specific membrane antigen** gene
INVENTOR(S): **Molloy, Peter Laurence; Watt, Fujiko**
PATENT ASSIGNEE(S): Commonwealth Scientific and Industrial Research Organisation, Australia
SOURCE: PCT Int. Appl., 56 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000052156	A1	20000908	WO 2000-AU143	20000301
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000027868	A5	20000921	AU 2000-27868	20000301
AU 773906	B2	20040610		
EP 1157105	A1	20011128	EP 2000-906080	20000301
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
NZ 513731	A	20021025	NZ 2000-513731	20000301
JP 2002537807	T2	20021112	JP 2000-602768	20000301
ZA 2001007020	A	20020826	ZA 2001-7020	20010824

PRIORITY APPLN. INFO.:
AU 1999-8956 A 19990301
AU 2000-5268 A 20000125
WO 2000-AU143 W 20000301

AB The invention provides regulatory constructs comprising intron 3 of the **prostate specific membrane antigen** gene (**PSMA**). An isolated nucleic acid mol. encoding the partial sequence of intron 3 of **PSMA**, a vector and a recombinant expression cassette are disclosed. The invention also provides a method of directing expression of a coding sequence in a prostate cell, a bladder cell, a breast cell and a vascular endothelial cell using the said constructs. This invention further provides a method of treatment of cancer using the said constructs. Identification and characterization of the **enhancer** are described,.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L8 ANSWER 5 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2000:224838 BIOSIS
DOCUMENT NUMBER: PREV200000224838
TITLE: **Prostate-specific** suicide gene therapy using the newly discovered **prostate-specific membrane antigen** (**PSMA**) **enhancer.**
AUTHOR(S): Uchida, Atsushi [Reprint author]; O'Keefe, Denise S.; Bacich, Dean J.; **Watt, Fujiko; Molloy, Peter L.**; Heston, Warren D. W.
CORPORATE SOURCE: Div of Molecular Sci, CSIRO, North Ryde, NSW, Australia
SOURCE: Proceedings of the American Association for Cancer Research Annual Meeting, (March, 2000) No. 41, pp. 380. print.
Meeting Info.: 91st Annual Meeting of the American Association for Cancer Research. San Francisco, California, USA. April 01-05, 2000.
ISSN: 0197-016X.
DOCUMENT TYPE: Conference; (Meeting)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English

ENTRY DATE: Entered STN: 31 May 2000
Last Updated on STN: 5 Jan 2002

L8 ANSWER 6 OF 8 MEDLINE on STN DUPLICATE 3
ACCESSION NUMBER: 2000511500 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11062377
TITLE: Overview of evolving strategies incorporating **prostate-specific membrane antigen** as target for therapy.
AUTHOR: Gong M C; Chang S S; **Watt F**; O'Keefe D S; Bacich D J; Uchida A; Bander N H; Reuter V E; Gaudin P B; **Molloy P L**; Sadelian M; Heston W D
CORPORATE SOURCE: Urology Department, Memorial Sloan-Kettering Cancer Center, New York, New York, USA.
SOURCE: Molecular urology, (2000 Fall) 4 (3) 217-22;discussion 223.
Ref: 21
Journal code: 9709255. ISSN: 1091-5362.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200012
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001207

AB **Prostate-specific membrane antigen** (**PSMA**) is a potential target in **prostate** cancer patients because it is very highly expressed and because it has been reported to be upregulated by androgen deprivation. This overview addresses the expression of the **PSMA** gene in terms of the promoter and **enhancer** and how that may play a role in gene therapy. We also review **PSMA** as a target for antibodies for imaging and treatment and the development of a novel hybrid T-cell receptor that combines the specificity of anti-**PSMA** antibodies with that of T-cell receptor activation when introduced into primary lymphocytes by retroviral-mediated gene transfer. We also discuss our recent findings on the expression of a **PSMA**-like gene and how that understanding allows specific targeting of **PSMA**.

L8 ANSWER 7 OF 8 MEDLINE on STN DUPLICATE 4
ACCESSION NUMBER: 2001022485 MEDLINE
DOCUMENT NUMBER: PubMed ID: 11027414
TITLE: **Prostate-specific** suicide gene therapy using the **prostate-specific membrane antigen** promoter and **enhancer.**
AUTHOR: O'Keefe D S; Uchida A; Bacich D J; **Watt F B**; Martorana A; **Molloy P L**; Heston W D
CORPORATE SOURCE: George M. O'Brien Urology Research Center, Department of Cancer Biology, Lerner Research Institute, Cleveland Clinic Foundation, Cleveland, Ohio, USA.
SOURCE: Prostate, (2000 Oct 1) 45 (2) 149-57.
Journal code: 8101368. ISSN: 0270-4137.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200011
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322

Entered Medline: 20001109

AB BACKGROUND: **Prostate-specific membrane antigen** (**PSMA**) is abundantly expressed in virtually 100% of **prostate** cancers and metastases. In addition, unlike prostate-specific antigen (PSA), **PSMA** is upregulated under conditions of androgen deprivation. Therefore, **PSMA** is an attractive therapeutic target for advanced prostate cancer. Recently, both the promoter and the **enhancer** driving prostate-specific expression of the **PSMA** gene were cloned. We describe here our analysis of the **PSMA enhancer** for the most active region(s) and present a way of using the **enhancer** in combination with the E. coli cytosine deaminase gene for suicide-driven gene therapy that converts the nontoxic prodrug 5-fluorocytosine (5-FC) into the cytotoxic drug 5-fluorouracil (5-FU) in prostate cancer cells. METHODS: Deletion constructs of the full-length **PSMA enhancer** were subcloned into a luciferase reporter vector containing either the **PSMA** or SV-40 promoter. The most active portion of the **enhancer** was then determined via luciferase activity in the C4-2 cell line. We then replaced the luciferase gene with the E. coli cytosine deaminase gene in the subclone that showed the most luciferase activity. The specificity of this technique was examined in vitro, using the prostate cancer cell line LNCaP, its androgen-independent derivative C4-2, and a number of nonprostatic cell lines. The toxicity of 5-FC and 5-FU on transiently transfected cell lines was then compared. RESULTS: The **enhancer** region originally isolated from the **PSMA** gene was approximately 2 kb. Deletion constructs revealed that at least two distinct regions seem to contribute to expression of the gene in prostate cancer cells, and therefore the best construct for prostate-specific expression was determined to be 1, 648 bp long. The IC(50) of 5-FC was similar in all cell lines tested (>10 mM). However, transfection with the 1648 nt **PSMA enhancer** and the **PSMA** promoter to drive the cytosine deaminase gene enhanced toxicity in a dose-dependent manner more than 50-fold, while cells that did not express the **PSMA** gene were not significantly sensitized by transfection. CONCLUSIONS: Suicide gene therapy using the **PSMA enhancer** may be of benefit to patients who have undergone androgen ablation therapy and are suffering a relapse of disease.

L8 ANSWER 8 OF 8 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN

ACCESSION NUMBER: 2000:200998 BIOSIS

DOCUMENT NUMBER: PREV200000200998

TITLE: **Prostate-Specific Membrane Antigen** (**PSMA**) promoter and **enhancer** driven Green Fluorescent Protein (GFP) expression in transgenic mice.

AUTHOR(S): Bacich, Dean J. [Reprint author]; O'Keefe, D. S.; **Watt, F. B.**; **Molloy, P. L.**; Heston, W. D. W.

CORPORATE SOURCE: Div of Molecular Sci, CSIRP, North Ryde, NSW, Australia

SOURCE: Proceedings of the American Association for Cancer Research Annual Meeting, (March, 2000) No. 41, pp. 19. print. Meeting Info.: 91st Annual Meeting of the American Association for Cancer Research. San Francisco, California, USA. April 01-05, 2000. ISSN: 0197-016X.

DOCUMENT TYPE: Conference; (Meeting) Conference; Abstract; (Meeting Abstract)

LANGUAGE: English

ENTRY DATE: Entered STN: 17 May 2000 Last Updated on STN: 5 Jan 2002

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     (FILE 'HOME' ENTERED AT 12:12:33 ON 28 SEP 2004)

     FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:12:47 ON 28 SEP 2004
L1          4461 S (MOLLOY, ?)/IN,AU
L2         13251 S (WATT, ?)/IN,AU
L3            55 S L1 AND L2
L4         17657 S L1 OR L2
L5          1938 S PSMA OR (PROSTATE (S) MEMBRANE (S) SPECIFIC (S) ANTIGEN)
L6            24 S L5 AND L4
L7            18 S L6 AND ENHANCER
L8             8 DUPLICATE REMOVE L7 (10 DUPLICATES REMOVED)

=> S PNP OR (PURINE (S) NUCLEOSIDE (S) PHOSPHORYLASE)
L9         14629 PNP OR (PURINE (S) NUCLEOSIDE (S) PHOSPHORYLASE)

=> S L9 AND L5
L10            1 L9 AND L5

=> D IBIB AB

L10  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2003:796516  CAPLUS
DOCUMENT NUMBER:          139:302024
TITLE:                    A composition and method for the treatment of tumors
INVENTOR(S):              Both, Gerald Wayne; Lockett, Trevor John; Molloy,
                          Peter Laurence; Cameron, Fiona Helen; Russell, Pamela
                          Joan; Martiniello-Wilks, Rosetta; Moghaddam, Minoo
                          Jalali; Smith, Ian Keith
PATENT ASSIGNEE(S):       Commonwealth Scientific and Industrial Research
                          Organisation, Australia
SOURCE:                   PCT Int. Appl., 42 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.            KIND   DATE        APPLICATION NO.          DATE
     ----------------      ----   --------    --------------------     --------
     WO 2003082323          A1    20031009    WO 2003-AU381            20030328
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM,
             PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT,
             TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ,
             MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG,
             CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC,
             NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
             GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:                        AU 2002-1456          A  20020328
AB   The invention provides a method of treating a solid tumor in a subject,
     the method comprising the following steps(i) delivering to the solid tumor
     a composition comprising an engineered ovine atadenovirus; and (ii)
     administering a prodrug to the subject, wherein the engineered ovine
     atadenovirus comprises a promoter and a gene encoding an enzyme which
     converts the prodrug to a cytotoxic metabolite, the gene being under the
     control of the promoter.
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REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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(FILE 'HOME' ENTERED AT 12:12:33 ON 28 SEP 2004)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:12:47 ON 28 SEP 2004
L1 4461 S (MOLLOY, ?)/IN,AU
L2 13251 S (WATT, ?)/IN,AU
L3 55 S L1 AND L2
L4 17657 S L1 OR L2
L5 1938 S PSMA OR (PROSTATE (S) MEMBRANE (S) SPECIFIC (S) ANTIGEN)
L6 24 S L5 AND L4
L7 18 S L6 AND ENHANCER
L8 8 DUPLICATE REMOVE L7 (10 DUPLICATES REMOVED)
L9 14629 S PNP OR (PURINE (S) NUCLEOSIDE (S) PHOSPHORYLASE)
L10 1 S L9 AND L5

=> S ANIMAL (S) MODEL
L11 647187 ANIMAL (S) MODEL

=> S LN3 OR PC3
L12 6469 LN3 OR PC3

=> S L11 AND L12
L13 195 L11 AND L12

=> S (NUDE OR BALB?) (S) (MOUSE OR MICE)
L14 241555 (NUDE OR BALB?) (S) (MOUSE OR MICE)

=> S L14 AND L12
L15 324 L14 AND L12

=> S L13 AND L15
L16 78 L13 AND L15

=> S L9 AND L16
L17 1 L9 AND L16

=> S L5 AND L16
L18 2 L5 AND L16

=> S L17 OR L18
L19 3 L17 OR L18

=> DUPLICATE REMOVE L19
DUPLICATE PREFERENCE IS 'EMBASE, BIOSIS'
KEEP DUPLICATES FROM MORE THAN ONE FILE? Y/(N):N
PROCESSING COMPLETED FOR L19
L20 3 DUPLICATE REMOVE L19 (0 DUPLICATES REMOVED)

=> D IBIB AB L20 1,2,3

L20 ANSWER 1 OF 3 BIOSIS COPYRIGHT (c) 2004 The Thomson Corporation. on STN
ACCESSION NUMBER: 2003:306637 BIOSIS
DOCUMENT NUMBER: PREV200300306637
TITLE: Radiolabeled monoclonal antibodies **specific** to the extracellular domain of **prostate-specific membrane antigen:** Preclinical studies in **nude mice**

bearing LNCaP human **prostate** tumor.

AUTHOR(S): Smith-Jones, Peter M.; Vallabhajosula, Shankar [Reprint Author]; Navarro, Vincent; Bastidas, Diego; Goldsmith, Stanley J.; Bander, Neil H.

CORPORATE SOURCE: Weill Medical College of Cornell University, 525 E. 68th St., STARR-221, New York, NY, 10021, USA svallabh@med.cornell.edu

SOURCE: Journal of Nuclear Medicine, (April 2003) Vol. 44, No. 4, pp. 610-617. print.
ISSN: 0161-5505 (ISSN print).

DOCUMENT TYPE: Article

LANGUAGE: English

ENTRY DATE: Entered STN: 2 Jul 2003
Last Updated on STN: 2 Jul 2003

AB **Prostate-specific membrane antigen** (**PSMA**), a transmembrane glycoprotein, is highly expressed by virtually all **prostate** cancers. **PSMA** is also expressed on the tumor vascular endothelium of virtually all solid carcinomas and sarcomas but not on normal vascular endothelium. **PSMA** is currently the focus of several diagnostic and therapeutic strategies. We have previously reported on the radiolabeling and in vitro binding properties of monoclonal antibodies (mAbs) (J415, J533, and J591) that recognize and bind with high affinity to the extracellular domain of **PSMA** (PSMAext). This article reports on the in vivo behavior and tumor uptake of 131I- and 111In-labeled anti-PSMAext mAbs (J415, J533, and J591) and their potential utility for radioimmunotherapy. Methods: In **nude mice** bearing **PSMA**-positive human LNCaP tumors, the pharmacokinetics, biodistribution, and tumor uptake of these antibodies was compared with 111In-7E11 mAb, specific to the intracellular domain of **PSMA** (PSMAint). Autoradiographic studies were done to identify intratumoral distribution of radiolabeled mAbs. Results: With 131I-labeled antibodies, the net tumor retention of radioactivity by day 6 was significantly higher with J415 (15.4% +- 1.1%) and 7E11 (14.5% +- 1.7%) than with J591 (9.58% +- 1.1%). By contrast, the tumor uptake of 111In-1,4,7,10-tetraazacyclododecane-N,N',N'',N'''-tetraacetic acid-labeled J415 and J591 gradually increased with time and was quite similar to that of 7E11. In addition, the blood clearance of 111In-labeled J415 and J591 antibodies was relatively faster than that of radiolabeled 7E11. As a consequence, the tumor-to-blood ratios with J415 and J591 were higher than that of 7E11. The localization of radiolabeled anti-PSMAext antibodies in **PSMA**-positive LNCaP tumors was highly specific because the tumor uptake of 131I-labeled J415 and J591 was more than twice that of a nonspecific antibody. Furthermore, the tumor uptake of 131I-J591 was almost 20 times higher in **PSMA**-positive LNCaP tumors than in **PSMA**-negative **PC3** and DU145 tumor xenografts. Autoradiographic studies suggested that 7E11 (anti-PSMAint) distinctly favors localization to areas of necrosis whereas J415 and J591 (anti-PSMAext) demonstrated a distinct preferential accumulation in areas of viable tumor. Conclusion: These results clearly demonstrate that **PSMA**-specific internalizing antibodies such as J415 and J591 may be the ideal mAbs for the development of novel therapeutic methods to target the delivery of beta-emitting radionuclides (131I, 90Y, and 177Lu) for the treatment of **PSMA**-positive tumors. In addition, because J591 and J415 mAbs are specific to PSMAext, thus targeting viable tumor, these immunoconjugates are better candidates for targeted radioimmunotherapy than are antibodies targeting PSMAint.

L20 ANSWER 2 OF 3 EMBASE on STN

ACCESSION NUMBER: 2002152854 EMBASE

TITLE: Transcription-targeted gene therapy for androgen-independent prostate cancer.

AUTHOR: Martiniello-Wilks R.; Tsatralis T.; Russell P.; Brookes D.E.; Zandvliet D.; Lockett L.J.; Both G.W.; Molloy P.L.; Russell P.J.
CORPORATE SOURCE: Dr. R. Martiniello-Wilks, Oncology Research Centre, Clinical Sciences Building, Prince of Wales Hospital, Randwick, NSW 2031, Australia. r.martiniello@unsw.edu.au
SOURCE: Cancer Gene Therapy, (2002) 9/5 (443-452).
Refs: 51
ISSN: 0929-1903 CODEN: CGTHEG
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
022 Human Genetics
028 Urology and Nephrology
037 Drug Literature Index
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The Escherichia coli enzyme (**purine nucleoside phosphorylase, PNP**) gene is delivered directly into **PC3** tumors by one injection of replication-deficient human type-5 adenovirus (Ad5). Expressed **PNP** converts the systemically administered prodrug, 6MPDR, to a toxic **purine**, 6MP, causing cell death. We sought to increase the specificity of recombinant Ad vectors by controlling **PNP** expression with the promoter region from the androgen-dependent, prostate-specific rat probasin (Pb) gene. To increase its activity, the promoter was combined with the SV40 enhancer (SVPb). Cell lines were transfected with plasmids containing both a reporter gene, under SVPb control, and a reference gene cassette to allow normalization of expression levels. Plasmids expressed .apprx.20-fold more reporter in prostate cancer than in other cells, but surprisingly, the SVPb element was both androgen-independent and retained substantial prostate specificity. Killing by Ad5-SVPb-**PNP** vector of cell lines cultured with 6MPDR for 6 days was 5- to 10-fold greater in prostate cancer than in liver or lung cells. In vivo, a single intratumoral injection of Ad5-SVPb-**PNP** (4x10(8) pfu), followed by 6MPDR administration twice daily for 6 days, significantly suppressed the growth of human prostate tumors in **nude mice** and increased their survival compared to control animals. Thus, the androgen-independent, prostate-targeting Ad5 vector reduces human prostate cancer growth significantly in vitro and in vivo. This first example of an androgen-independent vector points the way toward treatment of emerging androgen-independent prostate cancer in conjunction with hormone ablation therapy at a time when the tumor burden is low.

L20 ANSWER 3 OF 3 EMBASE
on STN
ACCESSION NUMBER: 2002116375 EMBASE
TITLE: In vitro and preclinical targeted alpha therapy of human **prostate** cancer with Bi-213 labeled J591 antibody against the **prostate specific membrane antigen.**
AUTHOR: Li Y.; Tian Z.; Rizvi S.M.A.; Bander N.H.; Allen B.J.
CORPORATE SOURCE: B.J. Allen, Centre for Exptl. Radiation Oncol., Cancer Care Centre, St George Hospital, Kogarah, NSW 2217, Australia. b.allen@unsw.edu.au
SOURCE: Prostate Cancer and Prostatic Diseases, (2002) 5/1 (36-46).
Refs: 65
ISSN: 1365-7852 CODEN: PCPDFW
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 016 Cancer
023 Nuclear Medicine

026 Immunology, Serology and Transplantation
028 Urology and Nephrology
030 Pharmacology
037 Drug Literature Index

LANGUAGE: English
SUMMARY LANGUAGE: English

AB Limited options for the treatment of **prostate** cancer have spurred the search for new therapies. One innovative approach is the use of targeted alpha therapy (TAT) to inhibit cancer growth, using an alpha particle emitting radioisotope such as (213)Bi. Because of its short range and high linear energy transfer (LET), α-particles may be particularly effective in the treatment of cancer, especially in inhibiting the development of metastatic tumors from micro-metastases. **Prostate-specific membrane antigen** (**PSMA**) is expressed in **prostate** cancer cells and the neovasculature of a wide variety of malignant neoplasms including lung, colon, breast and others, but not in normal vascular endothelium. The expression is further increased in higher-grade cancers, metastatic disease and hormone-refractory **prostate** cancer (PCA). J591 is one of several monoclonal antibodies (mabs) to the extracellular domain of **PSMA**. Chelation of J591 mab with (213)Bi forms the alpha-radioimmunoconjugate (AIC). The objective of this preclinical study was to design an injectable AIC to treat human **prostate** tumors growing subcutaneously in **mice**. The anti-proliferative effects of AIC against **prostate** cancer were tested in vitro using the MTS assay and in vivo with the **nude mice** model. Apoptosis was documented using terminal deoxynucleotidyl transferase [TdT]-mediated deoxyuridinetriphosphate [dUTP] nick end-labeling (TUNEL) assay, while proliferative index was assessed using the Ki-67 marker. We show that a very high density of **PSMA** is expressed in an androgen-dependent human PCA cell line (LNCaP-**LN3**) and in tumor xenografts from **nude mice**. We also demonstrate that the AIC extensively inhibits the growth of **LN3** cells in vitro in a concentration-dependent fashion, causing the cells to undergo apoptosis. Our in vivo studies showed that a local AIC injection of 50 μ Ci at 2 days post-cell inoculation gave complete inhibition of tumor growth, whereas results for a non-**specific** AIC were similar to those for untreated **mice**. Further, after 1 and 3 weeks post-tumor appearance, a single (100 μ Ci/100 μl) intra-lesional injection of AIC can inhibit the growth of **LN3** tumor xenografts (volume < 100 mm(3)) in **nude mice**. Tumors treated with AIC decreased in volume from a mean 46 ± 14 mm(3) in the first week or 71 ± 15 mm(3) in the third week to non-palpable, while in control **mice** treated with a non-**specific** AIC using the same dose, tumor volume increased from 42 to 590 mm(3). There were no observed side effects of the treatment. Because of its in vitro cytotoxicity and these anti-proliferative properties in vivo, the (213)Bi-J591 conjugate has considerable potential as a new therapeutic agent for the treatment of **prostate** cancer.

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(FILE 'HOME' ENTERED AT 12:12:33 ON 28 SEP 2004)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:12:47 ON 28 SEP 2004

L1 4461 S (MOLLOY, ?)/IN,AU
L2 13251 S (WATT, ?)/IN,AU
L3 55 S L1 AND L2
L4 17657 S L1 OR L2
L5 1938 S PSMA OR (PROSTATE (S) MEMBRANE (S) SPECIFIC (S) ANTIGEN)
L6 24 S L5 AND L4

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L7            18 S L6 AND ENHANCER
L8             8 DUPLICATE REMOVE L7 (10 DUPLICATES REMOVED)
L9         14629 S PNP OR (PURINE (S) NUCLEOSIDE (S) PHOSPHORYLASE)
L10            1 S L9 AND L5
L11       647187 S ANIMAL (S) MODEL
L12         6469 S LN3 OR PC3
L13          195 S L11 AND L12
L14       241555 S (NUDE OR BALB?) (S) (MOUSE OR MICE)
L15          324 S L14 AND L12
L16           78 S L13 AND L15
L17            1 S L9 AND L16
L18            2 S L5 AND L16
L19            3 S L17 OR L18
L20            3 DUPLICATE REMOVE L19 (0 DUPLICATES REMOVED)

=> S PROBASIN (S) PROMOTER
L21          306 PROBASIN (S) PROMOTER

=> S L5 (S) ENHANCER
L22           57 L5 (S) ENHANCER

=> S INTRON (2W) "3"
L23        3495 INTRON (2W) "3"

=> S L22 AND L23
L24            1 L22 AND L23

=> D IBIB AB L24

L24  ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2000:628262  CAPLUS
DOCUMENT NUMBER:          133:218508
TITLE:                    Regulatory constructs using the enhancer of
                          intron 3 of the androgen-independent
                          prostate specific membrane
                          antigen gene
INVENTOR(S):              Molloy, Peter Laurence; Watt, Fujiko
PATENT ASSIGNEE(S):       Commonwealth Scientific and Industrial Research
                          Organisation, Australia
SOURCE:                   PCT Int. Appl., 56 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.           KIND   DATE        APPLICATION NO.         DATE
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     WO 2000052156         A1    20000908    WO 2000-AU143           20000301
         W:  AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
             CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
             IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
             MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
             SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     AU 2000027868         A5    20000921    AU 2000-27868           20000301
     AU 773906             B2    20040610
     EP 1157105            A1    20011128    EP 2000-906080          20000301
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
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IE, SI, LT, LV, FI, RO

NZ 513731	A	20021025	NZ 2000-513731		20000301
JP 2002537807	T2	20021112	JP 2000-602768		20000301
ZA 2001007020	A	20020826	ZA 2001-7020		20010824
PRIORITY APPLN. INFO.:			AU 1999-8956	A	19990301
			AU 2000-5268	A	20000125
			WO 2000-AU143	W	20000301

AB The invention provides regulatory constructs comprising **intron 3** of the prostate specific membrane antigen gene (PSMA). An isolated nucleic acid mol. encoding the partial sequence of **intron 3** of PSMA, a vector and a recombinant expression cassette are disclosed. The invention also provides a method of directing expression of a coding sequence in a prostate cell, a bladder cell, a breast cell and a vascular endothelial cell using the said constructs. This invention further provides a method of treatment of cancer using the said constructs. Identification and characterization of the enhancer are described,.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> D HIS

(FILE 'HOME' ENTERED AT 12:12:33 ON 28 SEP 2004)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:12:47 ON 28 SEP 2004

L1	4461	S (MOLLOY, ?)/IN,AU
L2	13251	S (WATT, ?)/IN,AU
L3	55	S L1 AND L2
L4	17657	S L1 OR L2
L5	1938	S PSMA OR (PROSTATE (S) MEMBRANE (S) SPECIFIC (S) ANTIGEN)
L6	24	S L5 AND L4
L7	18	S L6 AND ENHANCER
L8	8	DUPLICATE REMOVE L7 (10 DUPLICATES REMOVED)
L9	14629	S PNP OR (PURINE (S) NUCLEOSIDE (S) PHOSPHORYLASE)
L10	1	S L9 AND L5
L11	647187	S ANIMAL (S) MODEL
L12	6469	S LN3 OR PC3
L13	195	S L11 AND L12
L14	241555	S (NUDE OR BALB?) (S) (MOUSE OR MICE)
L15	324	S L14 AND L12
L16	78	S L13 AND L15
L17	1	S L9 AND L16
L18	2	S L5 AND L16
L19	3	S L17 OR L18
L20	3	DUPLICATE REMOVE L19 (0 DUPLICATES REMOVED)
L21	306	S PROBASIN (S) PROMOTER
L22	57	S L5 (S) ENHANCER
L23	3495	S INTRON (2W) "3"
L24	1	S L22 AND L23

=> S L21 AND L22

L25	0	L21 AND L22

=> D HIS

(FILE 'HOME' ENTERED AT 12:12:33 ON 28 SEP 2004)

FILE 'MEDLINE, EMBASE, BIOSIS, CAPLUS' ENTERED AT 12:12:47 ON 28 SEP 2004

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L2	13251	S (WATT, ?)/IN,AU
L3	55	S L1 AND L2

L4	17657	S	L1 OR L2
L5	1938	S	PSMA OR (PROSTATE (S) MEMBRANE (S) SPECIFIC (S) ANTIGEN)
L6	24	S	L5 AND L4
L7	18	S	L6 AND ENHANCER
L8	8		DUPLICATE REMOVE L7 (10 DUPLICATES REMOVED)
L9	14629	S	PNP OR (PURINE (S) NUCLEOSIDE (S) PHOSPHORYLASE)
L10	1	S	L9 AND L5
L11	647187	S	ANIMAL (S) MODEL
L12	6469	S	LN3 OR PC3
L13	195	S	L11 AND L12
L14	241555	S	(NUDE OR BALB?) (S) (MOUSE OR MICE)
L15	324	S	L14 AND L12
L16	78	S	L13 AND L15
L17	1	S	L9 AND L16
L18	2	S	L5 AND L16
L19	3	S	L17 OR L18
L20	3		DUPLICATE REMOVE L19 (0 DUPLICATES REMOVED)
L21	306	S	PROBASIN (S) PROMOTER
L22	57	S	L5 (S) ENHANCER
L23	3495	S	INTRON (2W) "3"
L24	1	S	L22 AND L23
L25	0	S	L21 AND L22